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Changes in Farming in 1948

THIS year there is again urgent need for big production on American farms. More of some things will be needed than last year, and somewhat less of others, but the total calls for near capacity output.

Larger acreages than planted last year are needed for corn, oats, barley, sorghums, rye, dry beans and flaxseed. Suggested acreages for wheat, rice, and soybeans reflect a need for about all of these crops that we can turn out under good farming practices.

For most of our other annual crops, the suggested 1948 acreages are about the same as those planted last year. The big exceptions are tobacco and peanuts, whose production seems to be catching up with the demand at present prices. The large crops of citrus fruit, present and in prospect, are causing some concern over profitable outlets. Production of livestock and live-stock products probably will be slightly below last year. Still, the goals will be to produce as much of these products as practical, in view of our lower livestock numbers and smaller feed supplies.

The price outlook is good for most farm products. Although farmers'

costs are rising, high output probably will pay most farmers.

This will be the eighth successive year of high-level farm production. Such production can come only from a vigorous agriculture. This being true, let us look now at our agricultural plant.

Farmers in some areas have made important shifts in uses of land since 1940. Nevertheless, they have added but little to the total acreage cropped. Farmers have kept their land at work as steadily as practical, thus boosting production. At the same time, they have kept well in mind the dangers of soil depletion and erosion. They have done much to protect and build up their soil. As a result, they have held to a minimum the soil damage caused by heavy cropping.

The drain on the soil has been constant and heavy. In some areas, especially, the need for more soil conserving is acute. In the Great Plains, for example, well over 1,300,000 acres of grassland were broken for the 1947 wheat crop—more than in any of the last 11 years. Since 1946, farmers in the Plains have plowed up and planted in wheat close to 3 million acres of

Outlook Highlights

Meat: With livestock numbers down, and feed grain supplies smaller, consumers will get less meat this year than last. . . . Nearly 10 percent less meat will be produced than in 1947, but far more than the 1937-41 average. Last year's output was slightly above 1946 and only 8 percent below the 1944 peak. . . . Output of all kinds of meat is likely to be below 1947. *Cattle* and *calf* slaughter will be large but below last year's record of 36 million head. About 5 million fewer hogs will be killed than the 75.5 million in 1947. *Lamb* and *mutton* output will be down.

Parity: Prices paid by farmers in 1947, including interest and taxes, kept pace with those they received. The average of prices received by farmers was 122 percent of parity in January, about the same as a year earlier. However, after the February price break, this percentage fell to 112.

General Business: Average industrial output for 1947 was 10 percent above 1946. . . . Residential building will stay high this year. Volume may be up 10 percent from 1947; value, 20 percent. . . . *Housing boom* was a big prop for business activity in 1947. Some 860,000 permanent nonfarm dwelling units were started in 1947, compared with 670,500 in 1946 and the 1925 record of 937,000. Number of houses completed was 835,000, nearly double 1946. . . . High employment continues to help hold incomes up. In December, 57.9 million persons were working. That was 700,000 fewer than in November but 1.6 millions more than a year earlier. Nonfarm employment went to a high of 51.0 millions, but the number of workers on farms fell seasonally.

Wheat: January 1 stocks report indicates that over 650 million bushels of wheat disappeared in July-December 1947 out of 1,449 million bushels on hand July 1. Food use is estimated at 265 million, seed at 65 million, exports and shipments at 258 million. This indicates that only 65 million bushels were fed. . . . From January through next June, about 245 million bushels of wheat may be used for food, about 25 millions for seed. Feed use will be from 125 million to 175 million bushels. This would leave from 200 million to 250 million bushels for export in January-June if stocks go down to 150 million by July 1, the legal minimum. Exports for the year could then total from 450 million to 500 million bushels.

Dairy Products: A bigger share of *milk* is being used as whole milk than a year earlier. In December, *butter* production was 18 percent below a year earlier and the smallest for the month since 1920. In November, margarine output passed that of butter for the first time.

Eggs: Consumption will stay high. Eggs will be plentiful during flush production this spring. Prices are likely to hold near price support levels.

Fats and Oils: Demand will be strong for several months. Price changes will depend mainly on changes in supply. Prices of drying oils may average somewhat below 1946-47; soap fats about the same; food fats and oils slightly higher.

Fruits: Supplies are large and exports are off, with domestic demand no stronger than last winter. Prices probably will average lower than a year ago. *Citrus* prices probably will rise less than seasonally after the late winter harvest peak.

Vegetables: Demand for *fresh vegetables* will hold up well in the first quarter of 1948. The prices farmers get for most vegetables will average below a year ago. Demand for cabbage for sauerkraut will be better this spring than the unusually poor demand a year ago. Demand for green peas and cucumbers for pickles will be weaker than last year; for other processing crops it will be about the same as last year. . . . Potato prices to farmers in March will be seasonally higher than in January; moderately above a year earlier. Prices of sweetpotatoes probably will rise seasonally, but will be about the same as a year earlier.

grassland. At the same time, summer-fallowed land and land farmed on the contour have declined in this area.

For the Nation as a whole, nearly 156 million acres of intertilled crops are suggested for 1948. This total is about 9 million acres above last year. With this acreage, our use of land would be back to the full intensity of the war years. Because of the great needs for wheat and feed grains, about as much acreage is suggested for close-growing crops as we had last year. The total then was much above that of recent years.

Our acreage in tame hay is a barometer of our progress in soil conservation. The total of this acreage is above prewar. However, it is about 1 1/3 million acres below the 1942-46 average. Because of the world's urgent need for food, no added acreage in tame hay is suggested.

The degree to which good farming practice has given way to food needs varies from farm to farm. This year, most farmers will want to stress conservation systems of farming as much as they can. They realize that their main interest lies in working out farm set-ups that will furnish sound incomes, year in and year out.

The supply of farm labor for 1948 will be fairly large. At the same time, nonfarm work will be plentiful. As a result, farmers will have to bid against the cities for labor to an important degree. Competition will be strong in the areas near cities. Foreign workers will not be available to farmers under any government transportation program.

Working and living conditions will be important in bargaining for workers. Farm mechanization will emphasize the need for men who can handle farm machines. The record farm wage rates of last year will in all probability be maintained through 1948.

Year by year, farmers are doing a better job as managers. More and more, they are tending to have high school and college training in farming techniques. In addition, many are regularly getting technical advice on their production and management problems from State, Federal or private agencies.

Farmers' production costs in recent years have risen a good deal, although somewhat less than have prices for farm products. Many farmers have reasonable funds for operating capital, although their funds, dollar for dollar, will not go as far as prewar. Some farmers, on the other hand, had severe setbacks in 1947. The funds situation varies widely from region to region, from one farming type to another, and even between neighboring farms of the same type.

These variations may be shown by some examples. Typical family-operated cotton farms in the Southern Plains had net incomes of around \$3,200 in 1946. At the same time, typical cash grain farmers in the Corn Belt averaged about \$11,800 net income, and Southern Plains winter wheat producers got around \$14,000 net. These figures reflect the sharp differences in the sizes of crops, the production costs, and in prices obtained. During 1940-44, the average differences in income between these types of farms were much less.

Many full-time farmers have too little land and equipment to earn a good living. This will continue to be true, even with favorable prices and costs. In 1944, the census shows nearly 43 percent of the Nation's farms with less than \$1,200 worth of products. Farmers on these units operated less than 14 percent of our farm land and turned out only 8 percent of our farm production. To be sure, farms in this group include many part time units and others that are farms in name only. But

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on more than a third of them, the operators are primarily farmers.

About 5 percent fewer grain consuming animal units will be fed in 1947-48 than a year earlier. The total will be little above the prewar average. However, production per head of livestock is above prewar.

In the past year, we have eaten up our cattle and calves at a record rate. Heavy slaughter speeded the decline in number of cattle on farms that has been under way since 1944. Stock sheep numbers are now the lowest in 80 years. Last fall's pig crop, which will come to market this spring and summer, was 3 percent above the fall crop of 1946, but prospects are for a spring pig crop around 48 million head—9 percent below a year earlier.

Fewer chickens are being raised than in wartime. Output of poultry meat, which normally would rise quickly to fill any expected gaps in the red meat supply, will be hampered by high feed prices and the need for grain conservation.

Milk cow numbers have been falling since 1944. Still, milk production in 1948 may be nearly as high as in recent years and around 10 percent above prewar. Our "hay burners," horses and mules, continue to be replaced by machine power.

More farm machinery will be available for farmers to buy than last year, and in greater variety. Manufacturers are offering machines to fit a wide range of needs.

In the feeding year 1947-48 feed supplies will be off. The supply of feed concentrates, feed grains, byproduct feeds and wheat and rye to be fed, will be about 15 percent less than for 1946-47. Corn will furnish a smaller than average part of the 1948 feed supply. This shortage will be felt especially in areas that depend on in-shipments. The quantity of oats for feed is below that of the last two years but above prewar. More barley may be fed than in 1946-47, but much less than in any other year since 1938.

Byproduct feeds for this season are nearly up to the record tonnage of last year. Output of wheat millfeeds, gluten feed and meal, brewers' and distillers' dried grains, tankage and meat scraps are expected to be less than last

year. Oilseed meals make up a larger part of our supply of feed concentrates than ever before. Hay supplies in relation to the number of hay-eating livestock are generally at record highs. Yield and quality of hay continues upward, although the hay was poor in some areas last season. Feed supplies for the latter part of 1948 will depend upon the hay and grain grown this year.

Supplies of most hay seeds are below average. Alfalfa and timothy seed are exceptions, owing to the large 1947 crops. About 5 to 10 percent more fertilizer probably will be available to farmers this year than last year's record. Supplies of insecticides and fungicides will be adequate, except for the nicotene compounds. More lumber, nails, fencing, galvanized roofing and siding, and metal pipe will be on hand than in 1947, though not enough for all demands. Quantities of metal, wooden, paper and fabric containers will be generally adequate.

Northeast

The biggest production problems of Northeast farmers in 1948 will lie in the prices and supplies of feed-grain and concentrates for cows and poultry. The Northeast depends heavily on in-shipments of feed. Because of the smaller feed grain supply this season, Northeast farmers already have a feed problem and it is likely to get more serious before summer. At best, feed prices will be high. In recent months, milk-feed and egg-feed price ratios have been below those for the corresponding months of 1946, or the long-time average. In the next few months, these ratios may fall more than seasonally.

However, these price ratios do not have the same significance now as they did under lower price levels. The spreads between prices received and prices paid still provide incentives to efficient dairy and poultry farmers. Less efficient farmers may have a bad year. It will pay Northeastern farmers as a whole to watch carefully for ways to cut their costs.

Ways to trim costs will vary from farm to farm. Mostly, they will be found in the wider use of methods already proved good. In dairying, a possible adjustment to the tight feed-grain situation is to substitute hay and pas-

ture for grain. Most Northeast dairy-men have plenty of hay, which can be substituted to some extent for grain, particularly if the hay is of good quality. But this probably would mean less milk per cow. How far dairymen can afford to go in this direction is a question.

The answer can be found fairly well by estimating the change in milk output that would go with any particular substitution of hay for grain. Dairy farmers will have other ways to trim costs. Feeding efficiency can often be raised by feeding grain according to milk production. Disease control can usually be improved through better farm practices. Labor efficiency may be boosted through new devices and techniques.

The great opportunities of all may lie in a combination of adjustments. For example, a dairy farmer might expand his herd, grow more and better home-grown feed, speed up milking and improve his chore routine so workers could handle more cows. Steps such as forage improvement cannot be completed in one year, but may be essential for longer-term cost reduction. Also such steps can help out in 1948, at least to some degree.

Poultry farmers face relatively unfavorable price relationships. Cash costs are high and price ratios show up quickly in their effects on income. When cash receipts fall below cash expenses, the specialized poultryman has a hard choice. In some cases, he may be able to improve his position by expanding operations, by improving chore practices to save labor, by shifting breeds, or by other means. Most of the Northeastern layers, however, are in smaller flocks on dairy and general farms. Many such farms can readily shift the spotlight from poultry to other enterprises.

Corn Belt and Lake States

Feed grains, forage crops and soybeans are the foundation crops in the Corn Belt and Lake States. Feed output in these States does much to determine the quantities of livestock and livestock products the Nation produces. The choice that Midwestern farmers make during the next several years between feed grains and forage crops will

strongly influence our feed production, as well as the kinds of livestock products we produce.

Farmers in these areas know the need for a shift to cropping systems that include more grasses or legumes and less corn and soybeans, as a means for rebuilding their soils. The needed changes would cut down the output of grains for hogs. At the same time, these shifts would boost the forage supplies for beef cattle, dairy cattle, and sheep.

But the heavy drain on the soil, which has been under way since 1940, will continue another year at least.

Farmers this year are being encouraged to put in large acreages of corn. We need a large crop for feeding high-priced livestock this year, and for future reserves. With demand strong, farmers probably will also put much land into soybeans. All in all, this year will not be one of major shifts in the Corn Belt and Lake States.

Until the 1948 corn harvest, at the earliest, feed grain conservation will be necessary. Livestock growers will need to plan carefully to make the best uses of their grain. With livestock-grain price ratios likely to be narrow it will not pay farmers to feed hogs to heavy weights and cattle to a high finish. Also, such feeding would block the road to maximum output of food per unit of feed.

Corn Belt hogs between 225 and 250 pounds take 8 percent more feed to gain 100 pounds in weight than they eat in growing up to 225 pounds (including the feed and gain of the breeding herd). Hogs between 250 and 275 pounds consume 13 percent more, and hogs between 275 and 300 pounds, 18 percent more feed per 100 pounds of gain than the 225-pound hogs.

Under average Corn Belt conditions, feed concentrates that are used to feed cattle to a high finish will add less to the total food supply of the Nation than if this feed goes into bringing other cattle up to the "good" slaughter grade.

This is shown by the case of yearling steers that are fattened at the stage of "good" slaughter grade. These steers gain about 15 pounds in live weight for each 100 pounds of total feed eaten, whereas 100 pounds of feed will bring only about 10 pounds gain when the

steers reach "choice" slaughter grade. Also, much fat is put on in feeding cattle to top slaughter grades. Meat from a steer fattened beyond "good" slaughter grade usually has more fat than most people will eat.

As milk and its products are in large demand, dairy farmers in the Lake States and the Corn Belt will try to keep their milk output high. Lower cow numbers than last year, and smaller feed grain supplies, will limit production.

The South

Although many Southern farmers now depend less than before on the traditional cash crops of cotton, tobacco, peanuts, and rice—their major adjustment problem for the years just ahead will center around these crops.

Southern farming has changed a great deal since 1940. During the war, many farm people moved to town, paving the way to changes in land use and methods of operation. Farming became less intensive in many areas. More machines went into the fields. Labor-saving practices grew rapidly.

Thousands of acres were taken out of crops and put into pasture, particularly in the hill country. Much fewer acres went into cotton and corn and more into peanuts, tobacco, rice, small grains, and hay. Cattle numbers increased by one-fourth, and numbers of work animals fell off by a fifth. Many of these changes are still under way. However, cotton acreage went up last year. Also, more people are now on farms than at low point of the war.

In general the outlook for cotton this year is favorable. Farmers in good cotton areas probably will want to put more land in cotton than last year. The outlook is for a small carry-over next August. Present prices for cotton are favorable.

Also, the prices for the 1948 cotton crop are to be supported by the Government at 92½ percent of parity. Too few farm workers and high wage rates will hold down the acreage of cotton on many farms. Family size farms that have enough workers may find it pays to put in more cotton. The larger farms that hire a lot of labor, particularly in good cotton areas, probably will want to plant as much cotton as they can handle with available labor. There

will be some use of mechanical harvesters, but not enough as yet to have any great effect.

Tobacco farms face some sharp adjustments this year. Marketing quotas will be in effect for the year's flue-cured tobacco with allotments calling for a 28 percent cut below the 1947 acreage. Burley allotments will be about 7 percent below last year's acreage. These changes may hit hardest of all the very small farms that depend mostly on tobacco for their cash. Many operators of these farms will find it hard to shift to other cash crops. In some areas, farmers can shift to cotton or peanuts. However, in many others, these crops are not grown successfully. On larger farms, smaller acreages in tobacco may lead the way to desirable shifts, such as larger livestock and feed production.

Peanut farmers are in a situation roughly midway between cotton and tobacco growers. Peanut acreage is large and production within a year or two may be above demand at present prices. Peanut marketing quotas were voted by farmers last December 1947, but are suspended for this year, due largely to increased export demand.

Prices this year will be supported at 90 percent of parity—around \$200 per ton. On the better peanut farms, this price will make the crop attractive. Farmers will feel tempted to increase their peanut acreage. However, this temptation will be weighed against the probable need for further changes in 1949 and later.

In the poorer peanut areas, farmers may want to cut down somewhat from their record acreages. Trimming down on peanut acres for harvest would help to protect the soil on many farms, particularly in the specialized peanut areas.

The need for rice is urgent, and rice farmers will do their best to get large production. Conservation will be stressed more in later years, when demand falls off. However, many farms have overused their water resources. Safety requires planting to be more nearly in line with water facilities.

It will pay to grow good crops of cotton, peanuts, and rice this year. However, the longer-range need for shifts toward more feed crops and livestock will remain. Prospects are bright for

further gains in production of livestock and livestock products, especially of milk and beef. Much more output can be obtained through suitable shifts in land use.

More machinery will help Southern farmers to boost their crops of grain and hay. But it will pay farmers to choose carefully the types and sizes of equipment that are best suited to their needs.

The West

Farmers and ranchers of the West have made many changes in their operations since the war, as well as during war. They have shaped their farming to meet emergency food needs, and to take advantage of better prices, favorable growing conditions, and the expanding West Coast market.

In irrigated areas, farmers who took land out of sugar beets when labor supplies were tight, have pushed up their beet production to about prewar levels. A further boost in some areas will probably pay. However, the need for crop rotations and scarcity of labor may restrict output in some cases. In areas where the mechanical harvester and other labor-saving methods are satisfactory, beet farmers probably will profit by further mechanizing of operations.

Potato farmers in irrigated areas probably will want to plant their full potato allotment. Dry beans, sugar beets, hay, or other well adapted crops will go onto much of their land.

Wheat farmers will again try to grow as much wheat as practical. However, in parts of the Southwest, where seeding was late, grain sorghums and summer fallow may pay better than a poor stand of wheat. In the sawfly infested part of the spring-wheat area, planting more Rescue wheat would help to fight the sawfly. Barley is a good alternative crop here and will help ease sawfly damage.

In the wheat-pea area of the Northwest, farmers will gain by planting more wheat and less peas. Seeding wheat after wheat, especially if nitrate is added to the soil, and wheat after peas should be profitable this year. Land heavily infested with weeds may best go back to summer fallow.

Even in wartime, many wheat farmers clung to farming practices that

helped to catch and save soil moisture, and to prevent erosion. In total, however, the region's farmers will profit by more stubble mulching, strip cropping, grassed waterways, summer fallow, use of better wheat varieties, by some reseeding of land to grass.

The favorable outlook for meat and dairy products—and for poultry, eggs and turkeys, suggests the need for somewhat larger output of feed grains in this region. Demands for feed on the West Coast will be strong this year. Wider use of adapted seed varieties can bring higher yields. In some irrigated areas, barley will do better than spring wheat and oats, in terms of feed per acre.

Western markets are growing. Population has shrunk slightly in some of the Plains and Mountain States. On the West coast it has expanded remarkably. The gain in the coast areas since 1940 is over 39 percent. California alone has gained nearly 3 million people. The rise has been 15 percent in Utah, 30 percent in Arizona, and 26 percent in Nevada.

As a result, California is no longer a surplus State for eggs. Instead, poultrymen in Utah are now sending nearly all of their outshipments of eggs to the coast, whereas a few years ago their shipments went eastward. Washington, Oregon, and Idaho ship large quantities of eggs to California. Western poultrymen have benefited from this development. They can safely plan their operations to supply a still larger west coast population.

Many dairymen in the West will want to boost their production this year. An increase will be especially profitable for dairymen who supply west coast markets. However, the demand for dairy products in other areas also has risen faster than the supply. Most dairymen will find it pays to improve their feeding practices and care of the herd.

Stock sheep numbers now are the lowest in 80 years. Lack of herders during the war, uncertainties about the wool market, high costs, and better-paying alternatives led to liquidation.

Cattle numbers in this region have fallen off in the last two years. They were at a record high in 1944. Some liquidations last year were adjustments to drought conditions in the Southwest.

With a few exceptions, the numbers of range livestock probably are now at fairly safe levels in relation to range capacity.

Ranchers in 1943 will have a chance to improve their ranges and the quality of their livestock with less sacrifice than it might take later on. Depleted ranges may be reseeded, water systems improved, and better pasture management started. Better breeding practices will help get larger calf crops. Sheepmen will study their operations especially with an eye to cutting labor costs. Some of them may put up more fences and try to get on a pasture basis without herding.

Sheepmen and cattlemen probably will gain from the changing location of the market for their livestock. The west coast market is taking more and more stock, even from the western edge of the Great Plains. It will pay many stockmen to intensify their operations, if necessary, to carry their stock for

West Coast markets to a slaughterable finish, rather than selling them as feeders.

Citrus growers have some serious problems ahead. Without larger market outlets for citrus fruits, low prices are to be feared. In addition, citrus may run into sharper competition from other fruits. Producers of raisins and other dried fruit—peaches, apricots, prunes—also face difficult marketing problems in 1948.

The outlook for truck crops for fresh market and for processing is generally favorable. It would be easy, however, to overplant any one of several crops. Even with the greatly increased population, a large amount of both truck crops and fruits is still shipped to eastern markets and some is exported.

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Changes in Farming After 1948

THE huge rise in farm output in recent years has come in response to full blast consumption of our farm products, here and abroad. Future changes in production, therefore, must hinge importantly upon the ups and downs of over-all consumption, as well as upon shifts in demands between products.

Consumption at home is large, and growing rapidly. The American people are eating over 15 percent more per person than before the war. Besides eating more food per capita, there are a lot more of us than before the war. Our population now is 12 million above 1940. As a Nation, we are eating a total of about one-fourth more food than prewar. And the rise in population is still under way. For some time to come, each new year probably will add a million or more people to our total.

Even with a larger population, however, consumers' pocketbooks will keep on being the biggest factor in the demand picture. General business conditions—whether good or bad—will dictate the changes that will be needed in farming. We are now in a boom period. Consumers want and can pay for lots

of milk, meat, fruits, and vegetables for their tables. At least as long as consumer incomes are high, farmers can stress production of these items.

But besides our own consumption, many farmers also depend on export markets. Those markets will help decide some of the changes needed for the future. We are now exporting far more farm products than prewar. Farm exports in 1946 and 1947 were about 8 or 9 percent of our total farm output. In the years just before the war they were no more than 3 percent of the total.

The recent rise in exports is actually greater than these figures show, as our farm output jumped about one-third during the war. We exported only 8 percent of our wheat crop in prewar years, but in 1946 we shipped out about 23 percent of a much larger crop. Cotton, tobacco, and some fruits are other important export crops. Future changes in foreign demand will be of greatest concern to growers of these crops. But the foreign market is important to all farmers. All have an interest in the fact that growers of export crops can shift to production of other crops if the export market shrinks.

How large our total farm exports will be in the longer future is a question. As Europe is our biggest export customer, a lot depends on how fast Europe recovers from the war. In the near future, of course, our foreign market for farm products will depend heavily upon the size of our foreign aid program. A large-scale program would buoy up our exports for several years ahead. But in the longer run, Europe probably will reduce her food imports from this country.

Even before the war, our farmers had laid the foundation for bigger output. The war simply put more pressure behind such things as (1) shifts from animal to tractor power, (2) more use of fertilizer and lime, (3) better seed varieties, (4) more use of cover crops and other conservation practices, (5) better pest and disease control, and (6) better feeding of livestock.

Perhaps the biggest push to output in recent years came from the shift to machine power. The cropland and pasture released by this shift since 1918 was enough to feed about 19 million head of cattle and calves in 1947. The saving in grain was enough to feed about 25 million hogs to market weight.

Widespread adoption of improved practices has increased yields per acre, in pounds or in nutritive value. Hybrid seed has upped corn yields in the Corn Belt nearly 20 percent. Similar improvements have been made with oats and soybeans. Use of commercial fertilizer is now more than double the 1935-39 average. Application of lime has tripled or more, as has the acreage of winter cover crops. Numerous other conservation practices also have added materially to yields. More mechanical power and labor-saving machinery have also made it possible for farmers to do their work well and on time. Both corn and soybean yields were higher in the Corn Belt in some recent years because farmers had enough power to complete planting and cultivating promptly after the spring rains.

A gradual shift was made from grass hay to legume hay during the last 25 years, with only a moderate rise in hay acreage. This change has added about 40 percent to the amount of total digestible proteins available to animals from hay. The increase per unit of cattle and sheep may be as much as 75 per-

cent, since much of our grass hay goes to horses and mules. Production of oil-seed cake and meal has risen greatly. Added up, these things give farmers a better basis for livestock feeding than before.

In wartime, some land was put into crops than had been idle or used for pasture. More intertilled crops were planted, such as corn, soybeans, and peanuts. These shifts added to farm output, but less so than the gains in yield per acre.

Looking ahead, we can expect to keep on using more and more tractors for some years yet, with fewer horses and mules. Better seed varieties will be used, more fertilizer and lime, and better farming practices in general. We now have more land in intertilled crops than good conservation practices call for in the long run.

But a shift back to small grains, hay and pasture would not cut down grain production much; would add to forage supplies; and probably have little effect on our output of total feed units. Better rotations would bring still higher yields per acre. Farmers also will put some land back into permanent grass, but that will not affect output much.

Farm output will tend to stay high in the next few years, even if prices fall somewhat. Farm production is much more responsive to the upward pull of good prices and better practices than to the downward shove of depression. A big part of farmers' costs are fixed costs. Now that farmers have gone into more productive systems of farming, they will tend to keep on with those systems.

Corn Belt farmers have some big adjustments to make. During the war, they put about 11 million more acres into intertilled crops—chiefly corn and soybeans. Most of this land had been in grass. For the long run, these farmers will need a better balance between corn, soybeans, hay, and pasture.

Part of their land will need to go back to grass, to protect the soil. How much should be put into grass can't be known now. We don't yet know how much hay and pasture it will pay *Corn Belt* farmers to have in the future. If more hay and pasture and less grain could be profitably fed, especially to cattle and sheep, corn acreage might shrink somewhat.

The number of cattle and sheep that can be carried on farms and ranges is determined, in the long run, by two factors: (1) the volume of pasture, hay, and other forages grown; and (2) the number of horses and mules being fed. During the past 30 years, the peaks in the cycle of the total number of roughage-consuming animal units—including cattle, sheep and workstock—have not changed much. But the number of cattle and calves was 15 percent larger in 1944 than in 1918, with numbers of workstock down markedly.

Our grazing lands and harvested forage, under present methods, probably cannot safely carry over 82 million roughage-consuming animal units. This total is only a little above past peaks. Of course, the number of cattle and other stock cannot keep on making large gains indefinitely from the fading out of work animals. More pasture and hay will be needed if cattle numbers are to go on up.

The Western range is a relatively inflexible resource. Corn Belt and Southern farmers in the future will have a chance to grow more hay and pasture and a bigger share of our national supply of beef. The demand for more cattle should give them a profitable market. That is, of course, if farmers adopt methods for growing livestock at low costs per unit.

Northeastern and Lake States dairy farmers upped their milk output during the war. The demand is great, especially for fluid milk. But milk production is still not large enough for our food needs. Moreover, the recent upsurge in the birth rate has added to the age group that drinks the most milk per capita. If consumer incomes stay about like they are now, dairy products will be in strong position.

Dairymen have better chances than most other producers for widening market outlets for their products. Milk and dairy products at lower costs will reach more customers. And low costs come from good dairy practices. Better dairy techniques are constantly being developed. Even now, it will pay most dairymen to make fuller use of our growing technical knowledge.

Pasture and hay supply much of the feed in dairying. Probably many dairy farmers in both the Northeast and the

Lake States could be getting more benefit from their hay and pasture crops than now. Grass and legumes could be used to get more cheap feed and to rebuild the soil. Better methods of growing and harvesting feed crops can boost yields and lower costs, and better feed rations can be supplied by good quality forage crops.

Wheat farmers have upped their wheat acreage and production to about the limit. Since 1944, for example, nearly 5 million more acres in the Great Plains has been seeded to wheat. Along with their acreage increase, however, wheat farmers have had to skimp on some key management practices. In the last two years alone, summer fallow went off about 2 million acres. Less land is being "contour" farmed. Also, farmers in the Great Plains during the last three years have plowed up nearly 3 million acres of land that is risky for crops. Wheat farmers in the Pacific Northwest have plowed up much land of this type.

Of course, a great many wheat farmers have kept on with practices that help the land to catch and save moisture. They held on to their acreage of summer fallow, and put less productive cropland into grass. Farmers doing these things view these practices as safest and best in the long run. Their hay and grass, lays a foundation for livestock. Their livestock will help out a great deal if wheat supplies get too large in later years. These farmers then would be able to profit by feeding of wheat.

For the long pull, wheat farmers cannot count on the present big demand for their product at high prices. In the past, wheat farmers usually have had to look to the American market as their big outlet for food wheat. That situation will return after a few years.

By 1955 our own use of food wheat probably will be from 550 to 600 million bushels. About 75 million bushels will be needed for seed. If present wheat crops of from 1 to 1.3 billion bushels continue to be grown, we would then need to feed or export from 350 to 700 million bushels. After the present emergency, normal wheat exports may not be over 100 to 150 million bushels per year. In these circumstances, the

use of wheat for feed would be a safety valve.

Our normal wheat production capacity is now the largest in history. Wheat takes less labor on the farm per bushel and per acre than ever before. Physical inputs per unit of output have been slashed by better yields and mechanization. If smaller farms were expanded to sizes suitable for a farm family with modern machines, most wheat farmers would do fairly well. This would be true even if present price relationships were to become somewhat less favorable. However, there would be fewer wheat farmers.

Oilseed producers probably will not need to cut their acreage much for some time yet. Demand for oilseeds will stay fairly good for the next 4 or 5 years. Prices probably will go off some. However, they will stay well above prewar for several years. Total oil exports from this country and other parts of the world are still below prewar.

Over the longer period, fats and oils and protein meals will run into sharp competition from tropical oil crops.

But scybeans promise to be in stronger position than prewar as a claimant for cropland. More skill and equipment for growing and handling the crop, and better seed varieties have cut production costs. This crop now ranks close to corn in net cash returns per acre in the Corn Belt.

Markets for edible peanuts have expanded greatly. Much of the gains probably can be held. Hogging off of peanuts also is likely to find a larger place on Southern farms than before the war. In addition, further mechanization will help to maintain acreage.

Southern farmers now depend less on cotton than prewar, but their cotton problems will still be outstanding for the future. Although the American supply-demand situation is now favorable, it could easily change. Southern farmers will profit by standing ready to grow less cotton and by cutting production costs. Of course, lower costs can help to expand the market for cotton.

Greater efficiency in production is a major need. Generally, Southern farming has not kept pace with the growing efficiency in other sections. Many farmers have too little land and capital.

The low per capita production is reflected in low per capita incomes. With slightly over 40 percent of our total farm population, the 10 Southern States got only a little over a fifth of the Nation's cash farm receipts in 1945 and 1946.

The South has many small, uneconomic farms. Production would be made more efficient by converting these to family-sized farms, properly equipped. Such farms would need enough land to grow both cotton and livestock, or handle other combinations of enterprises.

If industry keeps on growing in the region, off-farm jobs will be more plentiful. These would help ease the pressure of population on the land, and enlarge local markets for farm products. Under proper conditions, much of the added output that is possible in the South can be consumed in the region.

Longer-term adjustment problems of vegetable growers will depend heavily upon general business conditions. Vegetable prices are highly responsive to changes in consumer purchasing power.

Quick-freezing techniques and new methods in transportation and distribution may bring big changes in vegetable markets in the next few years. Quick-frozen vegetables may take over more of the total market for vegetables. However, they may do this by taking the lion's share of the increase in consumption, rather than by cutting into the market for fresh vegetables and canned vegetables.

Citrus growers do not have a favorable market outlook. Their already large output is likely to rise for a number of years to come, as growing trees mature. Over half their acreage of grapefruit and oranges was planted after 1924. For the most part, these young trees will not reach full maturity for another decade or two. Production of grapefruit, oranges, and lemons in 1946 was more than 50 percent above the 1937-41 average. Maintenance of high levels of consumer purchasing power and expanded exports will be of special concern to citrus growers.

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Reduced Supplies of Meat

OUR meat supplies, smaller this year than last, reflect the fact that farmers have less livestock to sell. This production situation has been developing for some time and will not be overcome quickly.

Cattle numbers on farms are far below their wartime peak, and may not begin to climb again for two or three years. Numbers of stock sheep on farms were at an 80-year low at the start of 1947 and are even lower now. Although production of hogs can be upped faster than that of cattle and sheep, no rise in pork output is in sight until the summer and fall of 1949. The volume of hog production then will depend upon the size of this year's feed grain crop.

Cattle numbers grew at astounding rates during 1940 through 1943, when grazing conditions were unusually good. In some areas, cattle numbers were pushed beyond the grazing and feed resources that would have been available with less favorable weather. To meet the possible weather hazard and to provide more beef for food, cattlemen were urged to sell more cattle and calves for slaughter. They responded by larger marketings in 1944 and 1945.

Enough cattle and calves went to slaughter in those years to end the upward trend in cattle numbers that began in 1938. During 1945 and 1946, cattle numbers went down by 4½ million head. By the end of 1946, the number of cattle on farms had dwindled to about 81 million head.

Slaughter of cattle and calves set a new high during 1947. The reduction in numbers in 1947 was about 2½ million head, bringing the total on January 1, 1948, down to 78½ million, the lowest since 1942.

In earlier periods, down-trends in cattle numbers continued over a longer time than has elapsed so far in the current decline. Therefore, if cattle numbers follow the usual pattern, they will continue to shrink for several more years.

Stock sheep numbers in the early 1940's rose slightly above the rather large numbers of the 1930's. At the beginning of 1942, our stock sheep num-

bered over 49 million head. But from early 1942 to the end of 1947 their number shrunk by nearly 19 million head, or over one-third.

Although the reduction in sheep numbers has about come to an end, flocks probably will increase but slowly in the next few years. Immediate costs and returns for sheep production appear less favorable now, compared with other kinds of production, than in earlier periods when expansion occurred. Only small increases in sheep numbers can be expected soon. Expected reductions in supplies of beef in the years just ahead will not be offset by larger production of sheep.

Beyond the immediate situation of production and supply lies the larger problem of the long-run relationship between production and demand for meat. The population of the United States is increasing rapidly. This fast rate of growth will continue for several years. Even though our future exports of meat prove no larger than the small prewar quantities, livestock production in the future years will have to be much above prewar simply to provide as much meat per capita for the American people as we had before the war.

As livestock production depends on its feed resources, its expansion has practical limits. Pasture, hay, and forage provide most of the feed for cattle and sheep. How much beef, lamb, and mutton farmers and ranchers can turn out depends heavily upon roughage supplies. The number of horses and mules to be fed is also an item here.

Some idea of our practical capacity for producing cattle and sheep is shown by past numbers of roughage-consuming livestock, and by prospective trends in numbers of horses and mules. Since 1910, the number of roughage-consuming animal units, including cattle, sheep, horses, and mules, has ranged from 67 million in 1928 to 80 million in 1944. (A roughage-consuming animal unit is the equivalent of one milk cow in use of roughage.) The highest level before 1944 was reached in 1919 when 77.6 million units were on farms. For the entire period the average was nearly 73.3 million, about 4 percent more than in 1948.

In the last few years, livestock production has shown a bigger percentage gain in parts of the South than in any other section of the country. In the long run, the opportunities for expanding production of roughage-consuming livestock are greater in the Nation's humid regions than in the range areas. Native grasses and hays of the range lands do not offer as much flexibility in livestock production as do rotation pastures and tame hays in areas of more rainfall.

Taking into account the regional features, and past numbers, about 82 million roughage-consuming animal units (not animals) probably is the most we could carry safely in the future, under present livestock and crop practices. With average weather, and with horse and mule numbers still shrinking, 10 or 12 years hence we might well be able to carry around 90 million cattle and calves, 40 million stock sheep, and 6 million work stock.

More cattle and sheep could now be carried on our pasture, hay and forage resources than we have on hand. But to expand total cattle and sheep numbers will require that many animals be withheld from slaughter to add to the number of breeding animals. Just to stop the present downward trend in cattle numbers, for example, would require that the slaughter of cattle and calves this year be reduced to 30 million head—about one-sixth fewer than were slaughtered in 1947. As a rule, it takes 6 to 8 years for cattle numbers to build up from their lowest level to the next peak in the production cycle.

In the period while cattle and sheep numbers are being expanded, supplies of beef, lamb, and mutton will be smaller. Unless pork supplies are boosted to fill the gap, total supplies of meat will be smaller in the next few years.

How much pork farmers can produce depends more on the feed grain supply than on any other factor. During the

last 6 years farmers have grown an average of 15 percent more feed grains than in the 5 years just before the war when stocks in the "ever-normal granary" were built up.

Feed grain production will probably increase in the future, even with smaller acreages of some feed grain crops. However, 115 million tons is a reasonable estimate of what our total feed grain production may be some 10 years hence. If 15 million tons go for seed, human food, industrial uses and exports, 100 million tons of grain would be left for use as feed. This volume will support 170 million grain-consuming animal units at the same rate of feeding as in recent years. This assumes somewhat less wheat used for feed than in the last few years, but more than before the war. It also allows for the feeding of about the same volume of byproduct feeds as in recent years.

The total of 170 million grain-consuming animal units could include about 90 million head of cattle, with 30 million being milk cows, 40 million stock sheep, 5 to 6 million horses and mules, 12 percent more poultry than is now on farms and an annual pig crop of 90 to 95 million head.

This total of livestock would produce about 24 billion pounds of meat (excluding poultry) or 155 pounds per capita for 155 million people. But several years will elapse before so large a production can be attained.

In the meantime, the per capita consumption of meat is expected to be no greater than 150 pounds, but above the prewar average. If good feed grain crops are produced in 1948 and 1949, it will be possible to feed a pig crop of 90 million head in 1950 and provide for a per capita consumption of meat of 150 pounds, even with the low inventory numbers of cattle expected at that time.

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Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	1910-14=100					Index of prices received by farmers (August 1909-July 1914=100)			
			Average earnings of factory workers	Whole-sale prices of all commodities ³	Prices paid by farmers		Farm wage rates ⁴	Livestock and products			
					Com-modities	Com-modities, interest, and taxes		Dairy products	Poul-try and eggs	Meat animals	All live-stock
1910-14 average	58	50	100	100	100	100	100	101	101	101	101
1915-19 average	72	90	152	158	151	150	148	148	154	163	158
1920-24 average	75	122	221	160	161	173	178	159	163	123	142
1925-29 average	98	129	232	143	155	168	179	160	155	148	154
1930-34 average	74	78	179	107	122	135	115	105	94	85	93
1935-39 average	100	100	199	118	125	128	118	119	109	119	117
1940-44 average	192	234	325	139	150	147	212	162	146	171	164
1945 average	203	290	403	154	180	172	350	197	196	210	203
1946 average	170	270	391	177	202	193	378	242	198	256	240
1947 average	187	323	438	222	246	231	408	269	221	340	293
<i>1947</i>											
February	190	309	421	211	234	221	-----	270	192	319	272
March	189	313	425	218	240	226	-----	269	199	345	298
April	187	309	423	216	243	229	397	257	204	331	282
May	185	313	432	215	242	228	-----	241	203	327	275
June	184	319	440	216	244	230	-----	233	205	338	278
July	177	313	436	220	244	230	404	244	220	343	286
August	182	324	436	224	249	234	-----	258	224	349	295
September	186	337	448	230	253	238	-----	282	246	367	315
October	190	335	454	231	254	239	404	283	251	360	313
November	192	342	457	233	257	241	-----	293	242	338	304
December	192	355	469	238	262	245	-----	311	262	352	320
<i>1948</i>											
January	192	-----	-----	242	266	251	425	313	231	379	328
February	-----	-----	-----	263	248	248	-----	307	218	331	300

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Parity ratio ⁵	
	Crops									
	Food grains	Feed grains and hay	Tobacco	Cotton	Oil-bearing crops	Fruit	Truck crops	All crops		
1910-14 average	100	101	102	96	98	99	-----	99	100	
1915-19 average	193	164	187	168	187	125	7143	168	162	
1920-24 average	147	126	192	189	149	148	160	151	86	
1925-29 average	140	119	172	145	129	141	140	143	89	
1930-34 average	70	76	119	74	72	94	106	86	90	
1935-39 average	94	95	175	83	106	83	102	97	84	
1940-44 average	123	119	245	131	159	133	172	143	103	
1945 average	172	161	366	171	215	220	224	201	202	
1946 average	201	195	382	228	244	226	204	226	233	
1947 average	271	246	380	261	335	194	249	261	278	
<i>1947</i>										
February	235	185	390	246	334	203	275	245	262	
March	283	212	390	257	360	215	299	266	280	
April	277	223	387	260	358	223	295	269	276	
May	276	218	390	270	326	222	286	268	272	
June	253	240	390	275	318	228	215	262	271	
July	251	253	390	289	314	215	189	263	276	
August	246	270	383	267	308	177	211	255	276	
September	278	297	352	252	311	181	179	254	286	
October	302	284	357	247	344	166	238	261	289	
November	312	283	354	257	349	151	272	268	287	
December	318	305	377	275	367	149	294	281	301	
<i>1948</i>										
January	322	318	377	267	377	135	320	284	307	
February	251	261	374	248	333	136	320	257	279	

¹ Federal Reserve Board represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

² Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised April 1947.

³ Bureau of Labor Statistics.

⁴ Monthly data adjusted for seasonal variation.

⁵ Ratio of prices received to prices paid for commodities, interest, and taxes.

1924 only.

Poultrymen Face High Feed Costs

POULTRYMEN who keep light breeds of chickens may have another good year in 1948, similar to 1947. But white eggs are not expected to command as large a premium next fall as in 1947. Most poultrymen who raise heavy breeds have not had enough rise in income to make up for higher feed prices. As a result, the recent trend toward heavy breeds may be reversed this year.

The egg-feed price ratio for the fourth quarter of 1947 was the lowest on record for that season of the year. The price of poultry feed for October, November, and December was 256 percent of the 1935-39 average; while the farm price of eggs was only 204 percent. One dozen eggs would buy only 11.7 pounds of poultry feed compared with the 1924-47 average for those months of 16.6 pounds.

However, a favorable egg-feed price ratio of itself is no guarantee of pros-

perity for poultrymen. It was more favorable in 1932 than in any of the last four years. Yet, 1932 was one of the worst years poultrymen have had. Returns above feed cost can be high during periods of high prices, despite an unfavorable egg-feed price ratio.

Poultrymen in the Northeast who keep light breeds sell an average of 11.3 dozen eggs per 100 pounds of feed used, including what is fed to the rearing flock. At that rate, an increase of just under 8.9 cents per dozen in the farm price of eggs is enough to offset an increase of \$1.00 per hundred weight in the price of feed, other prices remaining the same.

Egg prices have advanced only a little more than enough to compensate for increases in the cost of feed on such farms. The 1935-39 national average price of a poultry ration of half mash and half scratch grain was \$2.11 per

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5 year average		Feb. 15, 1947	Jan. 15, 1948	Feb. 15, 1948	Parity price, Feb. 15, 1948
	August 1909-July 1914	January 1935- December 1939				
Wheat (bushel)	dollars	0.884	0.837	1.99	2.81	2.12
Rye (bushel)	do	.720	.554	2.33	2.47	1.94
Rice (bushel)	do	.813	.742	2.36	2.98	3.12
Corn (bushel)	do	.642	.691	1.23	2.46	1.92
Oats (bushel)	do	.399	.340	.797	1.27	1.04
Barley (bushel)	do	.619	.533	1.33	2.06	1.72
Sorghum grain (100 pounds)	do	1.21	1.17	2.15	3.77	3.00
Hay (ton)	do	11.87	8.87	17.50	18.70	19.60
Cotton (pound)	cents	12.4	10.34	30.56	33.14	30.71
Cottonseed (ton)	dollars	22.55	27.52	88.20	95.10	88.60
Soybeans (bushel)	do	1.96	.954	3.00	4.11	2.97
Peanuts (pound)	cents	4.8	3.55	9.05	10.1	10.0
Flaxseed (bushel)	dollars	1.69	1.69	6.96	6.71	5.73
Potatoes (bushel)	do	4.697	.717	11.30	1.86	1.93
Sweetpotatoes (bushel)	do	.878	.807	2.28	2.17	2.31
Apples (bushel)	do	.96	.90	12.79	2.02	2.00
Oranges on tree (box)	do	5 2.29	1.11	.92	.72	.89
Hogs (hundredweight)	do	7.27	8.38	124.30	26.70	21.60
Beef cattle (hundredweight)	do	5.42	6.56	117.00	21.50	19.50
Veal calves (hundredweight)	do	6.75	7.80	119.00	24.40	23.00
Lambs (hundredweight)	do	5.88	7.79	119.60	22.20	20.70
Butterfat (pound)	cents	26.3	29.1	67.8	87.7	84.9
Milk, wholesale (100 pounds)	dollars	1.60	1.81	14.46	5.09	4.98
Chickens (pound)	cents	11.4	14.9	25.3	26.3	26.0
Eggs (dozen)	do	21.5	21.7	38.6	48.7	45.0
Wool (pound)	do	18.3	23.8	141.1	40.7	41.0

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under sec. 3 (b) Price Control Act.

⁴ 1919-28 average of \$1.12 per bushel used in computing parity.

⁵ 1919-28 average for computing parity price.

⁶ Adjusted for seasonal variation.

hundred pounds. The national average farm price of eggs was 20.8 cents per dozen during that period. In 1947 the average price of feed was \$4.78 per hundredweight, or \$2.67 above 1935-39. The average farm price of eggs would have had to climb about 23.6 cents per dozen to make up for this rise in feed cost. The actual increase in the national average farm price of eggs was 24.1 cents per dozen.

Prices of poultry feeds rose sharply last fall. The December average price was \$1.32 per hundred pounds above December 1946. The farm price of eggs averaged 11.7 cents higher, only enough to balance the average increase in feed cost for light breeds.

The situation for Northeastern farmers who keep heavy breeds is somewhat worse than a year ago. On such farms only 8.6 dozen eggs are sold for each hundred pounds of feed used. Poultry meat sales, however, are an important source of income on such farms.

In recent years the trend has been toward heavy breeds, because of the relatively good demand for poultry meat. But poultry prices are now below a year ago. As a result, many poultrymen are expected to shift to light breeds in 1948. Even if poultry meat prices had stayed at the higher level of late 1946 and early 1947, prices for heavy-breed eggs last December would have had to be about 3 cents a dozen higher for farmers' returns above feed costs to equal December 1946.

Some poultrymen who raise heavy breeds for meat haven't enough poultry housing capacity to justify a change-over to lighter breeds. Many other poultrymen may find it wise not to make such a shift, even if they can do it readily.

The fact that many went over to heavy breeds in recent years is one of the main reasons why poultry meat was fairly plentiful last fall and why large white eggs of top quality brought as much as 10 cents a dozen more than brown eggs of like size and grade on the New York market. The pendulum could easily swing back, making heavy breeds more profitable than light breeds. The approaching shortage of all kinds of meat is a factor to be considered.

Many more layers have been kept per man on commercial poultry farms in recent years than before. Greater specialization and greater use of labor-saving equipment, such as automatic drinking fountains, have helped increase labor efficiency. Production per bird has also gone up a lot. Better breeding, heavier feeding and closer culling have been partly responsible.

These increases in efficiency have tended to buoy up poultry farm incomes in the face of mounting feed costs. Better production methods have helped to get high egg production. However, poultrymen who buy all of their feed and who do not use modern methods are finding that their net returns are falling. Cash receipts on many farms have not risen enough in the past year to cover the increased cost of feed, to say nothing of other things that poultrymen buy that have also gone up in price.

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